CHENBRO

Storage Chassis
2.5” HDD 8-Port 6Gb/s Mini-SAS Backplane

80H10323406A0

Rev A0

User’s Manual

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15Fl., No.150, Jian Yi Road, Chung Ho City, Taipei Hsien, Taiwan R.O.C.,
Tel: +886 2 82265500 Fax: +886 2 82265392 Email: info@chenbro.com.tw

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Chenbro HQ	Chenbro Europe B.V.	Chenbro Micom (USA) Inc.
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Revision History

Date	Modifications
Jan / 03 / 2011	● **First release**

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6Gb/s Backplane Specification

p/n : 80H10323406A0

Host Interface	**Mini-SAS (SFF-8087)**
HDD Interface	**SAS (22+7) and SATA-II compatible**
Hot-Swap	**Yes, allows user to replace HDD on line**
Display	**LED indicates HDD status (Defined by Chenbro)** **Power LED – Blue (When HDD is present)** **Access LED –Green (When HDD is busy)** **Error indicator – Red (Error when retreating signals)**
Cooling	**N/A**
Connectors	**1. SFF-8087 x 2 to host** **2. SAS (22+7) x 8 (for 2.5” HDD)** **3. Standard 4P Power connector x2** **(+5V & +12V from power supply)** **4. Pin header 2.54mm (2x4) *2** **5. Pin header 2.0mm (1x2) *1**
Dimension	**137(L) x 81.7(W) x 2.4(H) mm**
Material	**FR4 6 layer**

Accommodation Chassis

- ***RM235XX***
- ***RM417XX***
- ***RM418XX***

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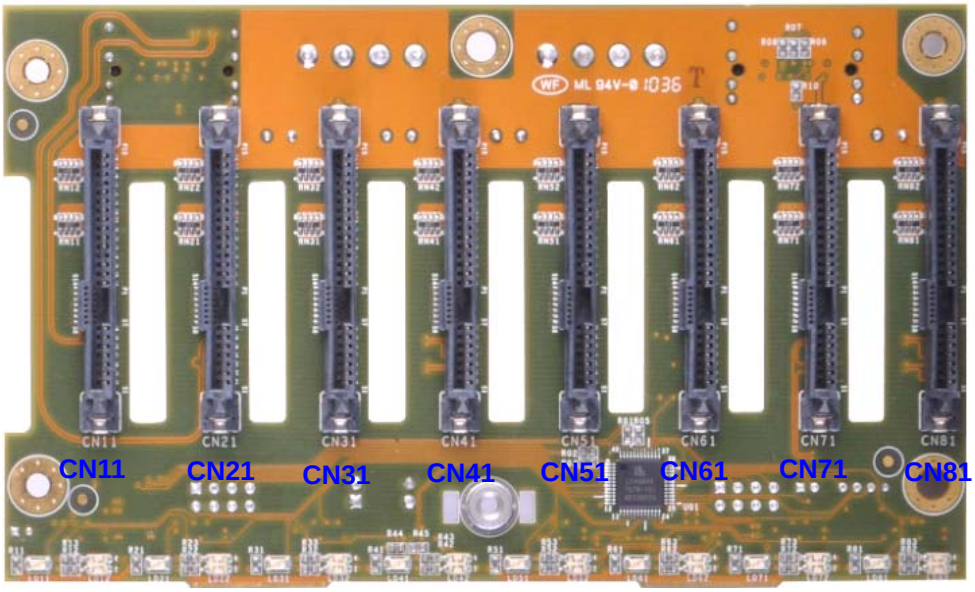
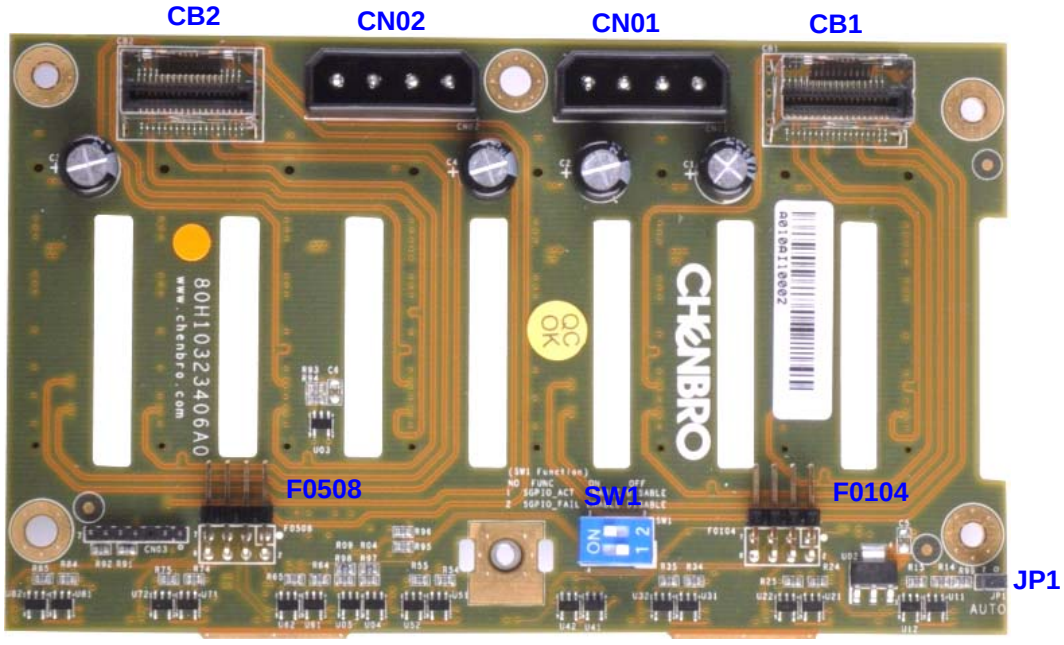
Backplane Layout

Backplane Connectors

Front View



Rear View



(1) [CN11 / CN21 / CN31 / CN41 / CN51 / CN61 / CN71 / CN81] : Connect to 22-pin SATA-II or 29-pin SAS HDD

(2) [CN01 / CN02] : Power Connector

(3) [JP1] : Auto Detect Function

(4) [F0104] : HDD Failure LED Signal Pin Header for HDD 1 ~ 4

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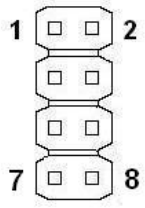
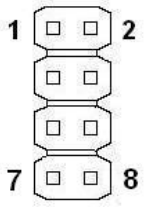
Pin NO.	Descriptions	Pin NO.	Descriptions
1	HDD Fail LED (CN11)	2	Not Used
3	HDD Fail LED (CN21)	4	Not Used
5	HDD Fail LED (CN31)	6	Not Used
7	HDD Fail LED (CN41)	8	Not Used



(5) [F0508] : HDD Failure LED Signal Pin Header for HDD 5 ~ 8

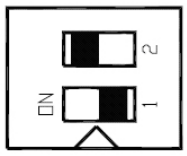
Pin NO.	Descriptions	Pin NO.	Descriptions
1	HDD Fail LED (CN51)	2	Not Used
3	HDD Fail LED (CN61)	4	Not Used
5	HDD Fail LED (CN71)	6	Not Used
7	HDD Fail LED (CN81)	8	Not Used



Connect the 4-pin HDD LED cable (26H113322-001) from F0104 / F0508 to the CATHODE of the HDD failure connector on RAID card. Refer to the RAID card's user manual for the detail pin definition.

(6) [SW1] : *SGPIO Function Switch*

	ON	OFF
SW1-2	HDD Failure Signal via Mini-SAS Port Enable	HDD Failure Signal via Mini-SAS Port Disable
SW1-1	HDD Access Signal via Mini-SAS Port Enable	HDD Access Signal via Mini-SAS Port Disable



Default Setting

SW1-1 HDD Access Signal:
When switch to OFF , HDD access LED still can work via SATA-II HDD applied

SW1-2 HDD Failure Signal:
When switch to OFF , connect F0104 / F0508 to RAID / HBA to active HDD failure LED on backplane by LED cable

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(6) [JP1] : Auto Detection Jumper For SAS or SATA HDD

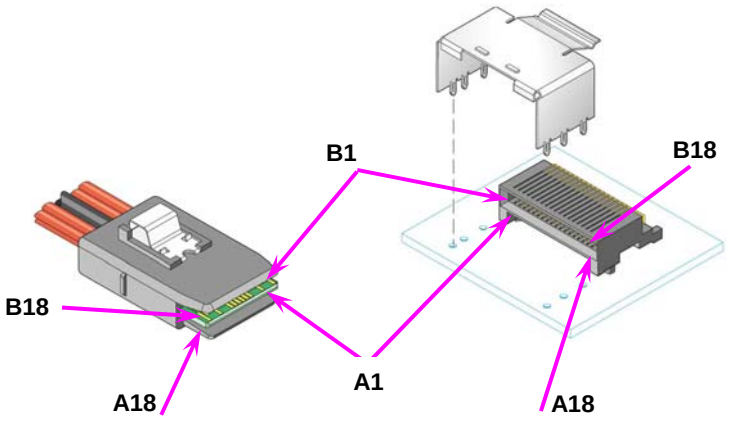
Jumper Closed: Enable Auto Detection (Default)

Jumper Opened: Disable Auto Detection

(7) [CB1 / CB2] : Mini-SAS connector, Pin Definition See Below Information

(8) [CN03] : Not Open To User

Pin Definition: SFF-8087 Mini-SAS 36-pin cable plug and receptacle connectors



Sideband Definition: The following table defines the SGPIO signal assignments for the Mini-SAS receptacle connector

Pin Number	Pin	Signal
A8	Sideband 0	SClock
A9	Sideband 1	SLoad
A10	Sideband 2	Ground
B9	Sideband 3	Ground
B10	Sideband 4	SDataOut
B11	Sideband 5	SDataIn
A11	Sideband 6	Reserved
B8	Sideband 7	SGPIO Enable / Disable

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6Gb/s Mini-SAS Cables

The Mini-SAS backplane provides most benefits to users using the same backplane to support various SAS/SATA RAID card via different conversion cables. Chenbro provides various cables for different interfaces which include the followings:

(A) SFF-8087 to SFF-8470

(B) SFF-8087 to SFF-8087

(C) SFF-8087 to 4 SATA

(D) 4 SATA to SFF-8087

(E) SFF-8484 to SFF-8087

(F) SFF-8088 to SFF-8088

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Table of Mini-SAS cable solution

Cable Type	Connector		P/N	Length
	BP side	Host side		
A	Mini-SAS (SFF-8087 36pin)	Infiniband / Multilane (SFF-8470)	26H113215-011	600 mm
B1	Mini-SAS (SFF-8087 36pin)	Mini-SAS (SFF-8087 36pin)	26H113215-012	600 mm
B2	Mini-SAS (SFF-8087 36pin)	Mini-SAS (SFF-8087 36pin R/A)	26H113215-019	600 mm
B3	Mini-SAS (SFF-8087 36pin)	Mini-SAS (SFF-8087 36pin)	26H114612-001	350 mm
C1	Mini-SAS (SFF-8087 36pin)	SATA-7Pin x4	26H113215-010	600 mm
C2	Mini-SAS (SFF-8087 36pin)	SATA-7Pin x4 R/A	26H113215-017	600 mm
C3	SATA-7Pin x4	Mini-SAS (SFF-8087 36pin)	26H113215-009	450 mm, 500 mm 650 mm, 750 mm
D	Mini-SAS (SFF-8087 36pin)	Wide-Port SAS (SFF-8484 R/A)	26H113215-013	600 mm
E	Mini-SAS (SFF-8087 36pin)	Wide-Port SAS (SFF-8484)	26H113215-016	600 mm
F	SATA-7Pin x4	Infiniband/Multilane (SFF-8470)	26H113215-015	450 mm, 500 mm 650 mm, 750 mm
G	Mini-SAS (SFF-8087 36pin)	Mini-SAS (SFF-8087 26pin)	26H113215-018	600 mm
H	SATA-7Pin x4	Wide-Port SAS (SFF-8484)	26H113215-020	450 mm, 500 mm 650 mm, 750 mm

Note: (1) Each Mini-SAS BP requires one of cables above (A)~(E)

(2) Cable-C3, F & H are for 4port SATA2/SAS BP with Multilane RAID card

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Backplane Assembly

The Chenbro 8-Port 6Gb/s Mini-SAS Backplane can be assembled on Chenbro HDD Cage For Modular Storage Server Chassis only. Please refer to the Chassis Quick Installation Guide for detail information.

Figure 1: 2.5” HDD Cage Front View

Figure 2: 2.5” HDD Cage Rear View

(3 pcs 8-Port Backplanes)

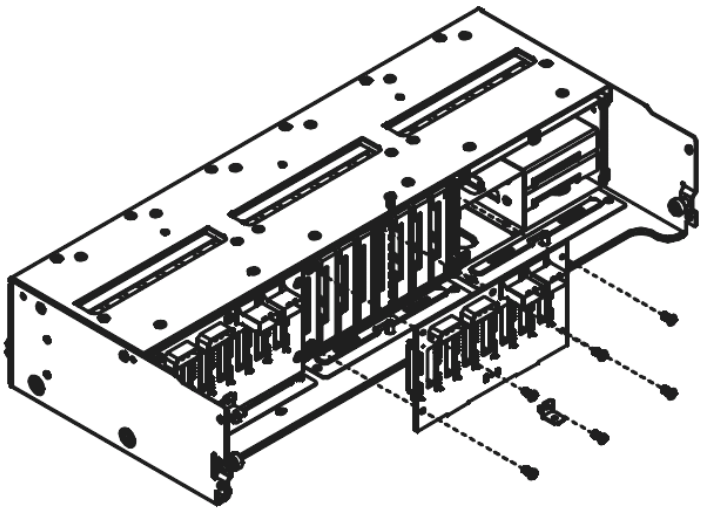

Figure 3: 2.5” 8-Port Backplane Assembly

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